# DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

#### LAKE TROPHIC DATA

# MORPHOMETRIC:

Lake: PARKER POND	Lake Area (ha): 8.01
Town: JAFFREY	Maximum depth (m): 2.3
County: Cheshire	Mean depth (m): 1.4
River Basin: Merrimack	Volume $(m^3)$ : 113000
Latitude: 42°51'15" N	Relative depth: 0.7
Longitude: 72°00'25" W	Shore configuration: 1.00
Elevation (ft): 1050	Areal water load (m/yr): 13.51
Shore length (m): 1000	Flushing rate $(yr^{-1})$ : 9.60
Watershed area (ha): 194.9	P retention coeff.: 0.52
<pre>% watershed ponded: 0.0</pre>	Lake type: natural

BIOLOGICAL:	14 January 2002	16 August 2001
DOM. PHYTOPLANKTON (% TOTAL) #:	SPARSE - NO DOMINANT	TINY PENNATE DIATOM 35%
#2	2	RHIZOSOLENIA 35%
#:	3	FILAM. BL-GR SPP 8%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		8.91
DOM. ZOOPLANKTON (% TOTAL) #:	KERATELLA 44%	KERATELLA 36%
#:	CILIATE SPP. 31%	NAUPLIUS LARVA 26%
#:	3	HEXARTHRA 20%
ROTIFERS/LITER	127	1143
MICROCRUSTACEA/LITER	40	549
ZOOPLANKTON ABUNDANCE (#/L)	254	1817
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		1.1
BOTTOM DISSOLVED OXYGEN (mg/L)	10.7	4.1
BACTERIA (E. coli, #/100 ml) #:	L	7
#:	2	
#:	3	

## SUMMER THERMAL STRATIFICATION:

# not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

CHEMICAL:			PARKER PO JAFFREY	OND	
	14 January 2002		16 August 2001		
DEPTH (m)	1.0		1.0		
pH (units)	6.0		6.2		
A.N.C. (Alkalinity)	3.3		3.3		
NITRATE NITROGEN	0.06		< 0.05		
TOTAL KJELDAHL NITROGEN	0.60		0.50		
TOTAL PHOSPHORUS	0.017		0.020		
CONDUCTIVITY (µmhos/cm)	91.1		78.6		
APPARENT COLOR (cpu)	44		65		
MAGNESIUM			0.66		
CALCIUM			2.2		
SODIUM			9.7		
POTASSIUM			< 0.40		
CHLORIDE	22		19		
SULFATE	5		2		
TN : TP	39		25		
CALCITE SATURATION INDEX			4.2		

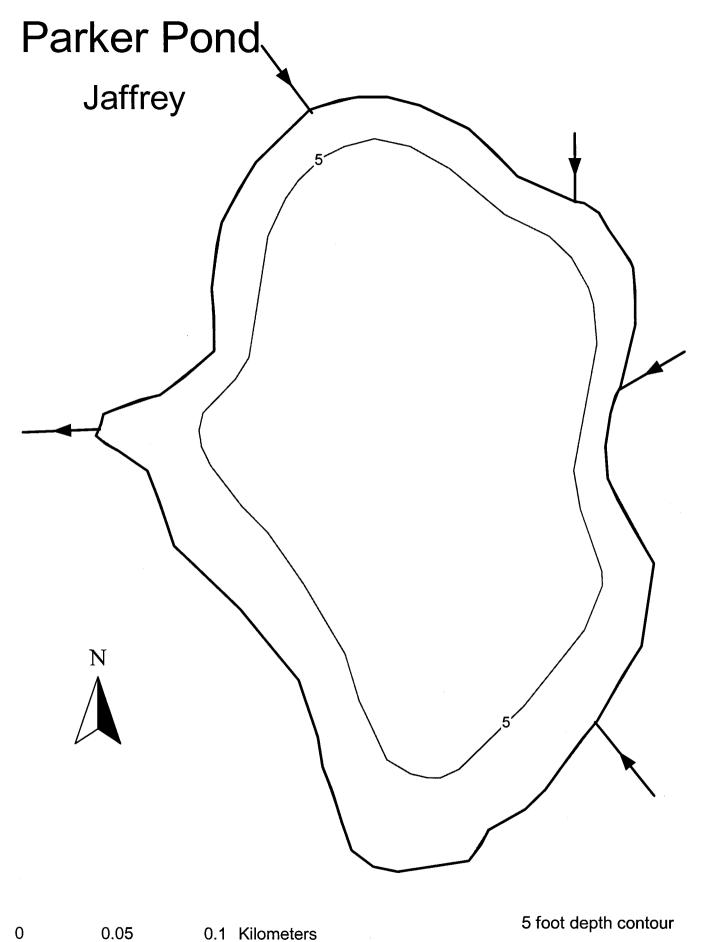
All results in mg/L unless indicated otherwise

#### TROPHIC CLASSIFICATION: 2001

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	6	2	12	Eutro.

## **COMMENTS:**

- 1. This pond is accessible by foot only approximately a ½ mile hike. Access to the water itself was by wading through knee-deep wetland muck and water to reach the open water.
- 2. Water level was down about 6 inches at the time of the summer survey.
- 3. This is a shallow, tea-colored eutrophic pond. Net phytoplankton was varied with 26 genera listed. Zooplankton were very abundant.
- 4. The sodium and chloride levels were unusually high for a remote pond. Road salt from Rt. 137 may be reaching the pond through the wetland.



III-166

#### FIELD DATA SHEET

LAKE: PARKER POND

DATE: 08/16/2001

TOWN: JAFFREY

WEATHER: Sunny, warm and breezy

 			<u>-</u>
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	24.4	5.1	61 %
1.0	24.2	5.1	60 %
2.0	23.6	4.1	48 %

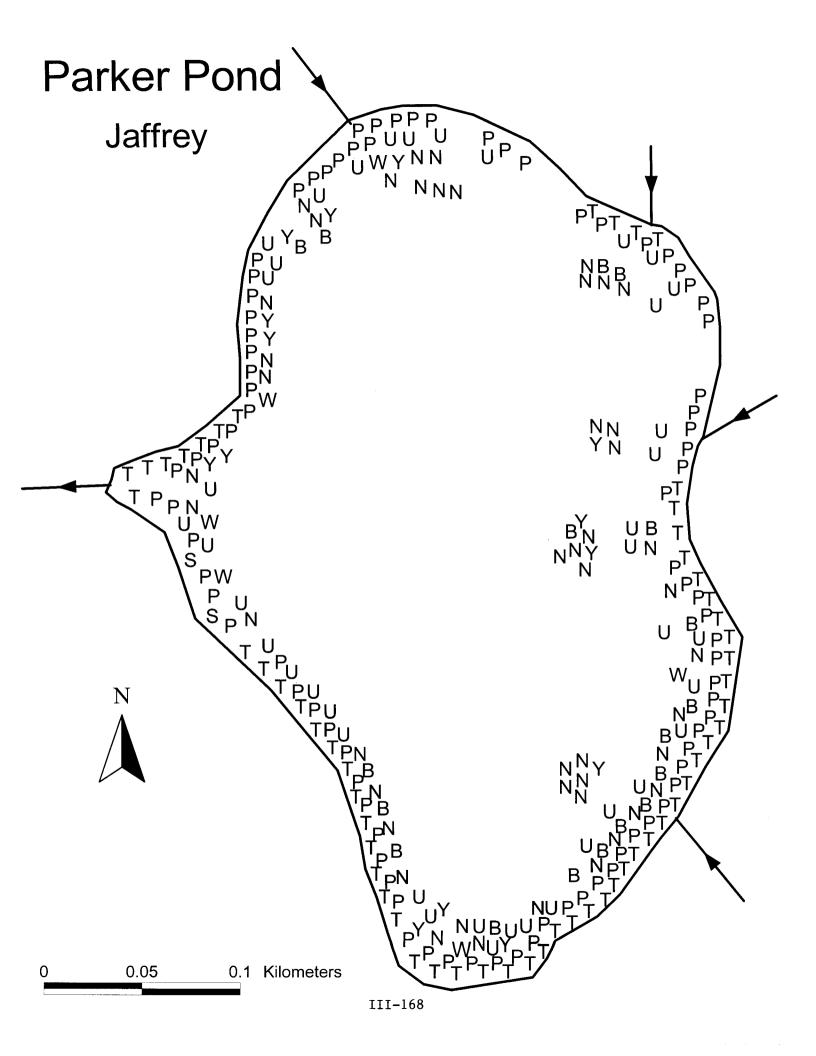
SECCHI DISK (m): 1.1

COMMENTS:

BOTTOM DEPTH (m): 2.3

TIME: 1115

\*Dissolved oxygen values are in mg/L



#### AQUATIC PLANT SURVEY

TOWN: JAFFREY

PLANT NAME Key ABUNDANCE **GENERIC** COMMON Т Typha Cattail Common/Abun Pontederia cordata Pickerelweed Abundant Nymphaea White water lily Abundant В Brasenia schreberi Water shield Common/Abun W Potamogeton Pondweed Common Utricularia Bladderwort Abundant Y Nuphar Yellow water lily Common/Abun S Sparganium Bur reed Scattered

OVERALL ABUNDANCE: Very abundant

DATE: 08/16/2001

## **GENERAL OBSERVATIONS:**

LAKE: PARKER POND

- 1. This is a totally undeveloped pond surrounded by wetlands.
- 2. This is a shallow eutrophic pond with very abundant plant growth.